

Enterprise Configuration Management Implementation (ECMI)
Attachment F - Phase I Measurement Set (v6)
12/19/01

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Purposes:

- Establish the basis for measuring progress toward institutionalization of enterprise configuration management concepts
- Establish a set of measures that will capture changes during phase I.
- Establish a measurement report format and frequency for the phase I reports.

Goal for Phase I:

Develop a methodology to measure improvements/ challenges in enterprise configuration management and project level configuration management deployment for the Phase I Period (10/01/01-3/22/02).

Organizations Performing Portions of Enterprise Configuration Management Functions

SFA Infrastructure Cells
AWG
ASG
Cross-Project
ECM
VDC Tuesday Meeting
VDC Thursday Meeting
Legacy/Budget
DSG/IRB

Dimensions and Levels of Enterprise Configuration Management Activities:

There are three major types of enterprise configuration management activities:

- Those performed at or in support of enterprise wide committees
- Those that transition from project to enterprise wide through escalation
- Those that represent auditing/coaching at project level

Enterprise Configuration Management Activities can be viewed as:

- ModPartner activities only
- ModPartner and legacy activities

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The checklist below partially identifies the depth of institutionalization of enterprise configuration management:

SA/CMM	Level Description	Activity Description
1-5	Baseline	What was the state of ECM on 10/01/01?
1	Informal	Each project and enterprise related decision is essentially made independently with documentation not necessary
Advanced 1	Formal Project/ Informal Enterprise	Each project may choose how but must follow certain types of processes in project level configuration management. Enterprise processes occur but are not well defined nor documented. Projects do not have a decision escalation process as defined within the SEI CMMs.
2	Formal Organization	Project and enterprise configuration management issues are both defined and followed. Projects have options to choose how but must follow certain types of processes.
3	Standards	The enterprise configuration management system has evaluated "best techniques" for its organization and prescribes some or all of the configuration management choices
4&5	Measure	The organization is able to measure and "steer" towards better solutions

Level	Sub-Activity Description	Project	Enterprise
1	Informal Decision-making	Decisions made with informal discussions; little documentation	Same as project. Decision-making dispersed throughout the organization; processes ill-defined.
Advanced 1	Decision-making has a defined and used process but documentation is lacking	Configuration management organization exists and is used but documentation is lacking	A hierarchy or structure of sub-organizational elements makes configuration management decisions but documentation is lacking
Very Advanced 1	Code version control exists but versions are not necessarily separable. Documentation is incomplete	Project example is check out code with no version control to retreat to. Documentation does not cover all of the CM functions nor is it adequately followed. Escalation path for decisions is not formal.	Enterprise decisions are made on the basis of a project need rather than on a system wide basis. Documentation is incomplete, not centralized and not easily researchable. Project escalation issues are treated informally.
2	Documentation meets SA-CMM	Project documentation	Structure includes an

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	standards and the processes are generally followed	meets QA standards and processes are followed. Escalation path defined. TTS documentation is part of the PRR process and is adequate.	escalation process for decisions, a library of standards, and a record keeping process for changes.
Advanced 2	Documentation meets NARA requirements for new production systems	New production project documentation meets minimum requirements and are stored in the NARA repository.	
Very Advanced 2	Documentation meets NARA requirements for systems in production	Help desk documentation, impact analyses, and decisions are stored in the NARA repository.	

Enterprise Configuration Management Measurements:

SA-CMM level	ECMI level	Description
1	1	ECMI identification of organizations that perform CM type functions
1	2	ECMI monitors ECMI discussions of organizations
1	3	# of Enterprise wide issues are formally tasked for analysis and decision
2	4	# of formally escalated project issues
2	5	# of formally documented recommendations/ decisions
2	6	# of policies/ decisions placed into a standards library
2	7	# of documents archived IAW GRS24

Project Level Configuration Management Deployment Measurements:

SW-CMM level	Proj CM level	Description
1	1	ECMI identification of distinctive Mod Partner projects that develop software code as a major component of the project
2	2	# of projects with formally identified CM Leads
2	3	# of projects with a formal change control board
2	4	# of projects with formally CM trained staff
2	5	# of projects with a written CM plan
2	6	# of projects with a written CM plan approved by SFA
2	7	# of projects with controlled documents
2	8	# of projects with version control on code
2	9	# of projects with RDM plan

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2	10	# of projects with documented CRs, impact analyses, and change control decisions
2	11	# of projects with controlled documents that include IRB decisions, security approval, and requirements change history
2	12	# of projects with archived documents IAW GRS24

Report Format:

Style is similar to the Progress Report Layout

Content Headers:

- Report Coverage
- Executive Summary
- Goal of Phase and Period Covered
- Baseline Assessment For the Period Covered
- Activities During the Period Covered

Frequency:

Approximately every other week